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     (FILE 'REGISTRY' ENTERED AT 09:56:01 ON 21 JUN 2001)
                DEL HIS Y
                ACT FARBA2/A
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L1              STR
L2            4 SEA FILE=REGISTRY SSS FUL L1
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     FILE 'HCAPLUS' ENTERED AT 09:58:22 ON 21 JUN 2001
L3            3 S L2
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=> fil reg

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STRUCTURE FILE UPDATES: 19 JUN 2001 HIGHEST RN 342573-24-4
DICTIONARY FILE UPDATES: 19 JUN 2001 HIGHEST RN 342573-24-4

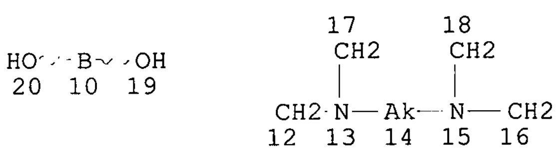
TSCA INFORMATION NOW CURRENT THROUGH January 11, 2001

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

Structure search limits have been increased. See HELP SLIMIT
for details.

=> d que stat l2

L1 STR



NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE
L2 4 SEA FILE=REGISTRY SSS FUL L1

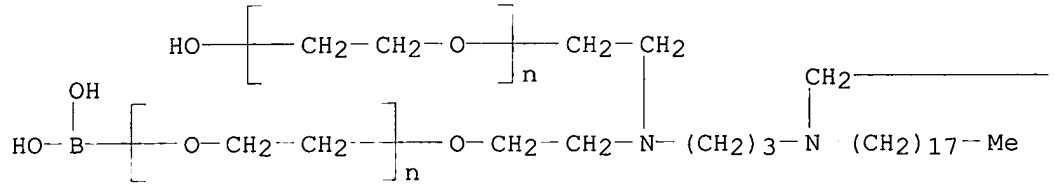
100.0% PROCESSED 725 ITERATIONS 4 ANSWERS
SEARCH TIME: 00.00.01

=> d ide can l2 1-4

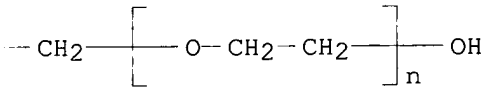
L2 ANSWER 1 OF 4 REGISTRY COPYRIGHT 2001 ACS
RN 172650-84-9 REGISTRY
CN Poly(oxy-1,2-ethanediyl), .alpha.-borono-.omega.-[2-[(2-hydroxyethyl)[3-[[(2-hydroxyethyl)octadecyl]amino]propyl]amino]ethoxy]-, ether with .alpha.-hydro-.omega.-hydroxypoly(oxy-1,2-ethanediyl) (1:2) (9CI) (CA INDEX NAME)
MF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C27 H59 B N2 O5
CI PMS
PCT Polyether

SR CA
LC STN Files: CA, CAPLUS

PAGE 1-A



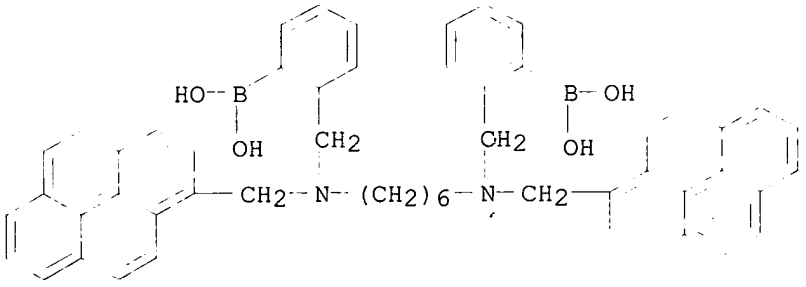
PAGE 1-B



1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 124:121818

L2 ANSWER 2 OF 4 REGISTRY COPYRIGHT 2001 ACS
RN 170454-33-8 REGISTRY
CN Boronic acid, [1,6-hexanediylbis[[(1-pyrenylmethyl)imino]methylene-2,1-phenylene]]bis- (9CI) (CA INDEX NAME)
MF C54 H50 B2 N2 O4
SR CA
LC STN Files: CA, CAPLUS



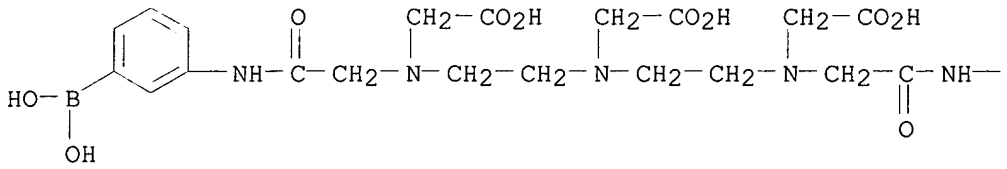
1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 123:328796

L2 ANSWER 3 OF 4 REGISTRY COPYRIGHT 2001 ACS
RN 146892-94-6 REGISTRY
CN Glycine, N,N-bis[2-[[2-[(3-boronophenyl)amino]-2-

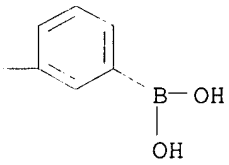
oxoethyl](carboxymethyl)amino]ethyl]-, tripotassium salt (9CI) (CA INDEX NAME)
MF C26 H35 B2 N5 O12 . 3 K
SR CA
LC STN Files: CA, CAPLUS

PAGE 1-A



● 3 K

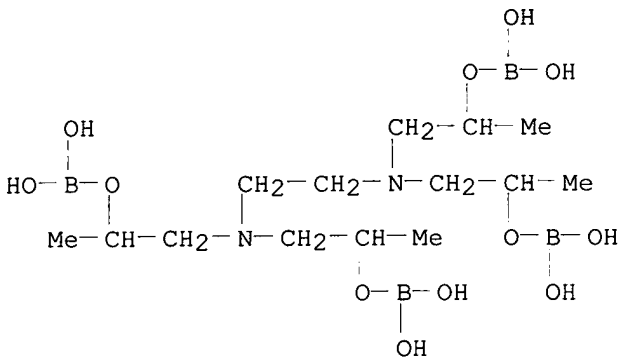
PAGE 1-B



1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 118:224354

L2 ANSWER 4 OF 4 REGISTRY COPYRIGHT 2001 ACS
RN 63938-89-6 REGISTRY
CN 2-Propanol, 1,1',1'',1'''-(1,2-ethanediyldinitrilo)tetrakis-, ester with boric acid (H3BO3) (1:4) (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2-Propanol, 1,1', 1'', 1'''-(ethylenedinitrilo)tetra-, tetrakis(borate) (7CI)
MF C14 H36 B4 N2 O12
LC STN Files: BEILSTEIN*, CAOLD, RTECS*
(*File contains numerically searchable property data)



2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> fil hcaplus

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FILE COVERS 1947 - 21 Jun 2001 VOL 134 ISS 26
FILE LAST UPDATED: 20 Jun 2001 (20010620/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

This file supports REG1stRY for direct browsing and searching of all substance data from the REGISTRY file. Enter HELP FIRST for more information.

HCAplus now provides online access to patents and literature covered in CA from 1947 to the present. On April 22, 2001, bibliographic information and abstracts were added for over 2.2 million references published in CA from 1947 to 1966.

'OBI' IS DEFAULT SEARCH FIELD FOR 'HCAPLUS' FILE

=> d his l3

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FILE 'HCAPLUS' ENTERED AT 09:58:22 ON 21 JUN 2001
L3 3 S L2

FILE 'REGISTRY' ENTERED AT 09:59:07 ON 21 JUN 2001

FILE 'HCAPLUS' ENTERED AT 09:59:21 ON 21 JUN 2001

=> d .ca hitstr 1-3

L3 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1995:947099 HCAPLUS
DOCUMENT NUMBER: 124:121818
TITLE: Lubricating oil additives and lubricating oil compositions for diesel engines
INVENTOR(S): Kita, Kazuo; Inaya, Shuichi
PATENT ASSIGNEE(S): Kao Corp, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07197062	A2	19950801	JP 1993-335792	19931228

OTHER SOURCE(S): MARPAT 124:121818

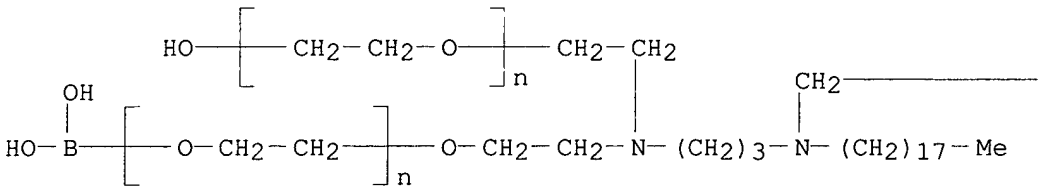
AB The additives comprise boric acid salts, boric acid esters, and/or boric acid amides of amine compds. R1N(A1O)mH(A2O)nH, NR2R3(A3O)lH, and/or NR4C3H6N[(A4O)pH(A5O)qH](A6O)rH (R1-4 = C8-28 hydrocarbons; A1-6 = C2-4 alkylene; l, m, n, p, q, r = 0-20; m + n = 1-20; p + q + r = 1-20). The additives may contain metallic detergents. The compns. contain base oils mixed with ashless dispersants and extreme-pressure lubricants. The products have good detergency and long life.

IC ICM C10M139-00
ICS C10M133-08
ICI C10N030-04, C10N040-25
CC 51-8 (Fossil Fuels, Derivatives, and Related Products)
IT 31017-83-1D, boric acid amide derivs. 36356-75-9D, boric acid amide derivs. 106392-12-5D, reaction products with stearylpropylenediamine, borate salts 172650-76-9 172650-77-0 172650-78-1 172650-79-2 172650-80-5 172650-81-6 172650-82-7 172650-83-8 **172650-84-9**
RL: MOA (Modifier or additive use); USES (Uses)
(lubricating oil additives contg. amine borates for diesel engines for detergency and long life)

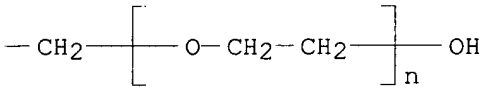
IT **172650-84-9**
RL: MOA (Modifier or additive use); USES (Uses)
(lubricating oil additives contg. amine borates for diesel engines for detergency and long life)

RN 172650-84-9 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), .alpha.-borono-.omega.-[2-[(2-hydroxyethyl)[3-[[(2-hydroxyethyl)octadecyl]amino]propyl]amino]ethoxy]-, ether with .alpha.-hydro-.omega.-hydroxypoly(oxy-1,2-ethanediyl) (1:2) (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



L3 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1995:688056 HCAPLUS
DOCUMENT NUMBER: 123:328796
TITLE: Two dimensional photoinduced electron transfer (PET) fluorescence sensor for saccharides
AUTHOR(S): Sandanayake, K. R. A. Samankumara; James, Tony D.; Shinkai, Seiji
CORPORATE SOURCE: Shinkai Chemirecognics Project, ERATO, Kurume, 830, Japan
SOURCE: Chem. Lett. (1995), (7), 503-4
CODEN: CMLTAG; ISSN: 0366-7022
DOCUMENT TYPE: Journal
LANGUAGE: English

QD1.C45

AB The cooperative binding of two boronic acid moieties was used to create a two-dimensional fluorescence sensor for saccharides. The photoinduced electron transfer switching mechanism was used to provide information of saccharide concn. while the excimer emission changes of the pyrene moieties provide the nature of the complex.

CC 80-2 (Organic Analytical Chemistry)
Section cross-reference(s): 9, 22, 25, 33, 73, 74

IT 50-99-7D, Glucose, complexes with boronic acids 57-48-7D, Fructose, complexes with boronic acids 59-23-4D, Galactose, complexes with boronic acids 107-21-1D, 1,2-Ethanediol, complexes with boronic acids 6038-51-3D, Allose, complexes with boronic acids 156742-45-9D, complexes with saccharides **170454-33-8D**, complexes with saccharides 170454-34-9D, complexes with saccharides
RL: FMU (Formation, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); FORM (Formation, nonpreparative); PROC (Process)
(stability consts. and fluorescence of)

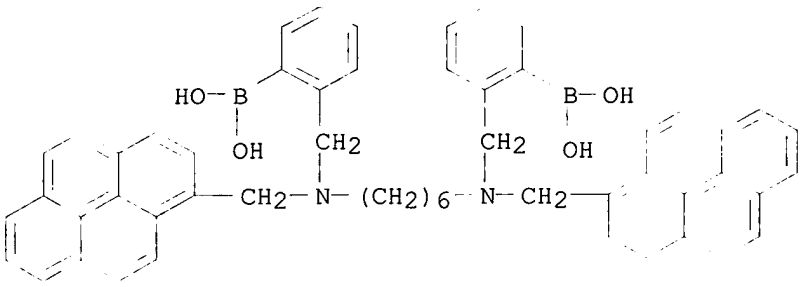
IT **170454-33-8P**
RL: ARG (Analytical reagent use); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES
(Uses)

(two-dimensional photoinduced electron transfer (PET) fluorescence sensor for saccharides)

IT **170454-33-8D**, complexes with saccharides
RL: FMU (Formation, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); FORM (Formation, nonpreparative); PROC (Process)
(stability consts. and fluorescence of)

RN 170454-33-8 HCAPLUS

CN Boronic acid, [1,6-hexanediylbis[[(1-pyrenylmethyl)imino]methylene-2,1-phenylene]]bis- (9CI) (CA INDEX NAME)



RL: ARG (Analytical reagent use); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES
(Uses)
(two-dimensional photoinduced electron transfer (PET) fluorescence sensor for saccharides

L3 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1993:224354 HCAPLUS
DOCUMENT NUMBER: 118:224354
TITLE: Synthesis and characterization of a novel DTPA-like gadolinium(III) complex: a potential reagent for the determination of glycated proteins by water proton NMR relaxation measurements
AUTHOR(S): Aime, Silvio; Botta, Mauro; Dastru, Walter; Fasano, Mauro; Panero, Maurizio; Arnelli, Aldo
CORPORATE SOURCE: Dip. Chim. Inorg., Chim. Fis. Chim. Mater., Univ. Torino, Turin, I-10125, Italy
SOURCE: Inorg. Chem. (1993), 32(10), 2068-71
CODEN: INOCAJ; ISSN: 0020-1669
DOCUMENT TYPE: Journal
LANGUAGE: English

QD151.L9

QD1.17

AB The synthesis of a DTPA-like ligand, (HO)2B-m-C6H4NHCO{CH2N(CH2COOH)CH2}3CONH-m-C6H4B(OH)2 (H3L) and GdL(H2O) (3) is reported. The measurement of the proton relaxation rate over the proton Larmor frequency range of 0.01-50 MHz of an aq. soln. to this paramagnetic complex suggests that it contains only 1 H2O mol. in its inner coordination sphere, as was previously found for the parent DTPA complex. Competition trials in presence of variable amts. of [Gd-EDTA]- afford a Kf value of 2.0 .times. 1016. Since the boronic functionalities form stable

linkages with sin-diol moieties, the interaction of 3 with glycinated albumin leads to the formation of a ternary albumin-3 complex. The large size of this adduct is responsible for a lengthening of the mol. reorientational time .tau.R, which in turn results in an increase of H2O proton relaxation rate (R1p). The obsd. R1p enhancement then provides a direct evaluation of the extent of glycation of the albumin specimen.

CC 78-7 (Inorganic Chemicals and Reactions)
Section cross-reference(s): 9, 29, 77

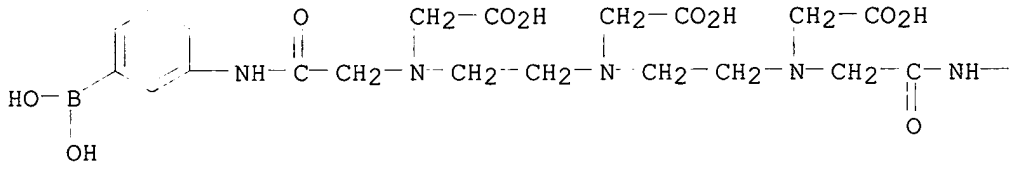
IT **146892-94-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction of, with gadolinium chloride)

IT **146892-94-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction of, with gadolinium chloride)

RN 146892-94-6 HCAPLUS

CN Glycine, N,N-bis[2-[[2-[(3-boronophenyl)amino]-2-oxoethyl](carboxymethyl)amino]ethyl]-, tripotassium salt (9CI) (CA INDEX NAME)

PAGE 1-A



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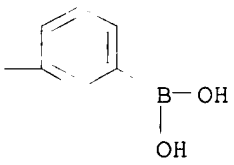
PAGE 1-B



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FILE COVERS 1907-1966
FILE LAST UPDATED:  01 May 1997 (19970501/UP)

This file contains CAS Registry Numbers for easy and accurate
substance identification.  Title keywords, authors, patent
assignees, and patent information, e.g., patent numbers, are
now searchable from 1907-1966.  TIFF images of CA abstracts
printed between 1907-1966 are available in the PAGE
display formats.

This file supports REG1stRY for direct browsing and searching of
all substance data from the REGISTRY file.  Enter HELP FIRST for
more information.

=> d his l4


     (FILE 'HCAOLD' ENTERED AT 13:25:26 ON 21 JUN 2001)
L4            2 S L2

     FILE 'HCAOLD' ENTERED AT 13:25:35 ON 21 JUN 2001

     FILE 'HCAOLD' ENTERED AT 13:25:52 ON 21 JUN 2001

=> d  all hitstr 1-2


L4   ANSWER 1 OF 2  HCAOLD  COPYRIGHT 2001 ACS
AN   CA56:15366c  CAOLD
TI   diesters of dithiosulfurous acid
AU   Wolff, William F.
DT   Patent
     PATENT NO.    KIND         DATE
     ------------  -----------  ----
PI   US 3015670                 1962
IT   63938-89-6
IT   63938-89-6
RN    63938-89-6  HCAOLD
CN   2-Propanol, 1,1',1'',1'''-(1,2-ethanediyldinitrilo)tetrakis-, ester with
     boric acid (H3BO3) (1:4) (9CI)  (CA INDEX NAME)
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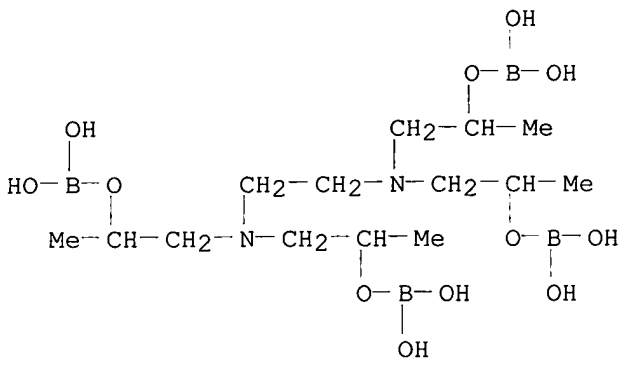

L4 ANSWER 2 OF 2 HCAOLD COPYRIGHT 2001 ACS
AN CA56:15365e CAOLD
TI tetrakis(dihydroxyboroxyalkyl)alkylenediamines
AU Rudner, Bernard; Moores, M. S.
PA Koppers Co., Inc.
DT Patent

PATENT NO.	KIND	DATE
US 3000924		1961

IT **63938-89-6**
IT **63938-89-6**
RN 63938-89-6 HCAOLD
CN 2-Propanol, 1,1',1'',1'''-(1,2-ethanediyldinitrilo)tetrakis-, ester with boric acid (H3BO3) (1:4) (9CI) (CA INDEX NAME)